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VIEW DOWN THE PROPOSED NEW MAIN AXIS OF THE CAMPUS PRINCETON UNIVERSITY

PRINCETON ARCHITECTURE

BY RALPH ADAMS CRAM, F.A.I.A., SUPERVISING ARCHITECT

THE material development of Princeton during the last twenty years has been only less fundamental and significant than the scholastic and educational evolution with which it steadily has kept pace. On the one hand has been the making of a small college into a great university, on the other the creation of an architectural expression that only should not show outwardly the new and very exalted quality of the institution itself, but also should become the great cultural influence good art must always be. In this, in a way, Princeton stands alone. Columbia, California, Stanford, Washington (St. Louis), have all started afresh, on virgin soil, and in varying degrees, and in still more varying fashions have endeavored to create a dignified scholastic expression, unhampered by precedent, uncontrolled by existing structures, generally, to say the least, somewhat unaccommodating as to the attainment of any effect of unity and consistency. Princeton, like Harvard, Yale, Dartmouth, Williams, Cornell, confronted a harder problem, and, first of all the institutions in this class, has set herself definitely to the task of assimilating the heterogeneous repast of varied types of æsthetic food she had wolfed down during her formative period, with scant attention to gustatorial harmonics or the possibilities of a normal digestive system. It is curious that Princeton should thus far be the only university, so handicapped by the defiant individualism of a light-hearted past, to realize that architecture and æsthetic organization are not matters of predilection, but are fundamental necessities. Tentative essays have indeed elsewhere been made, but at best these amounted to little more than the acquiring from landscape gardeners of suggestions as to the obtaining of pleasant effects in sites, vistas and gracefully curving paths, no effort being made towards establishing a consistent style and logical plan, or the elimination of well-meaning but impossible monuments to the taste of past authorities who "did not know much about art, but did know what they

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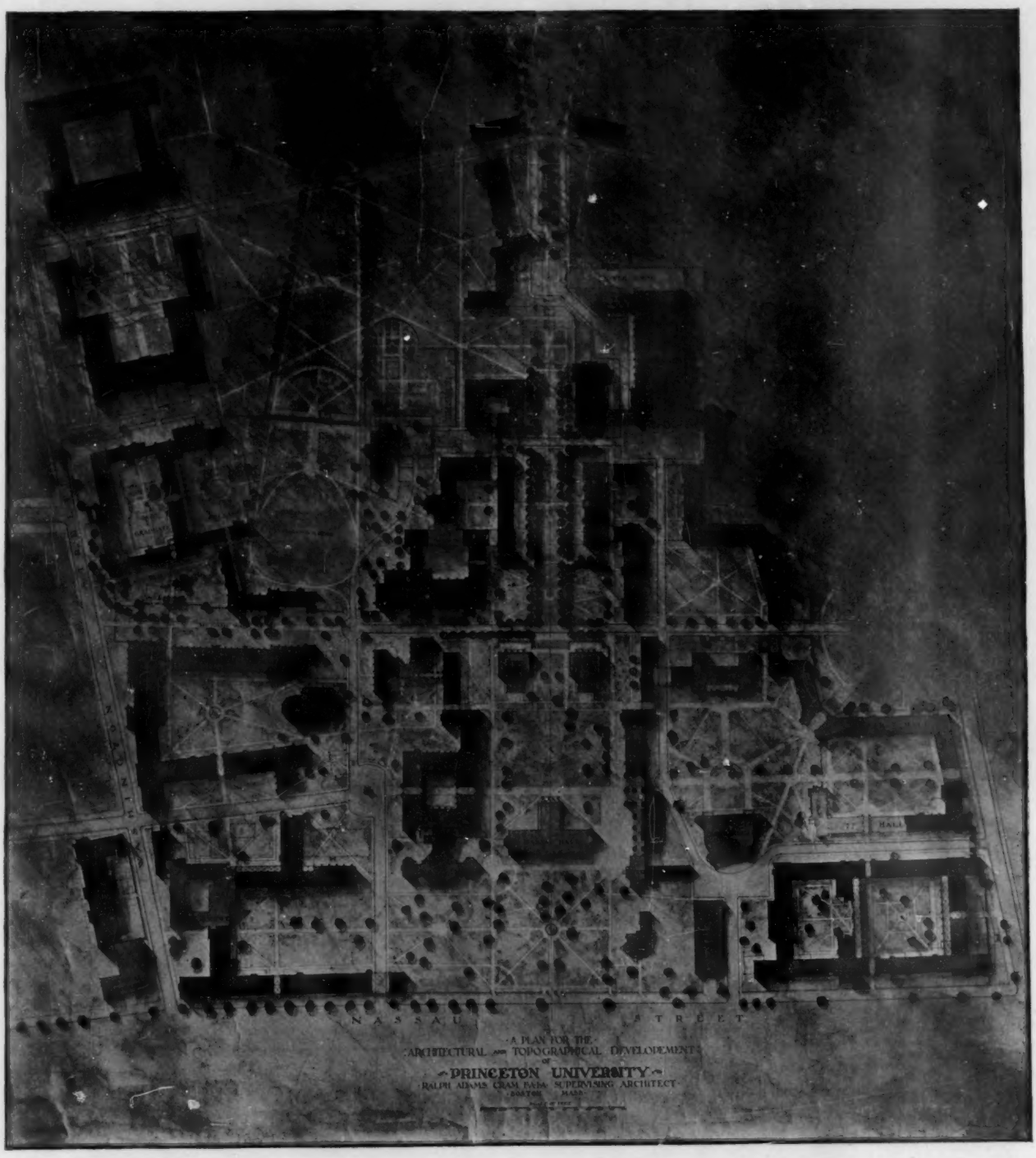
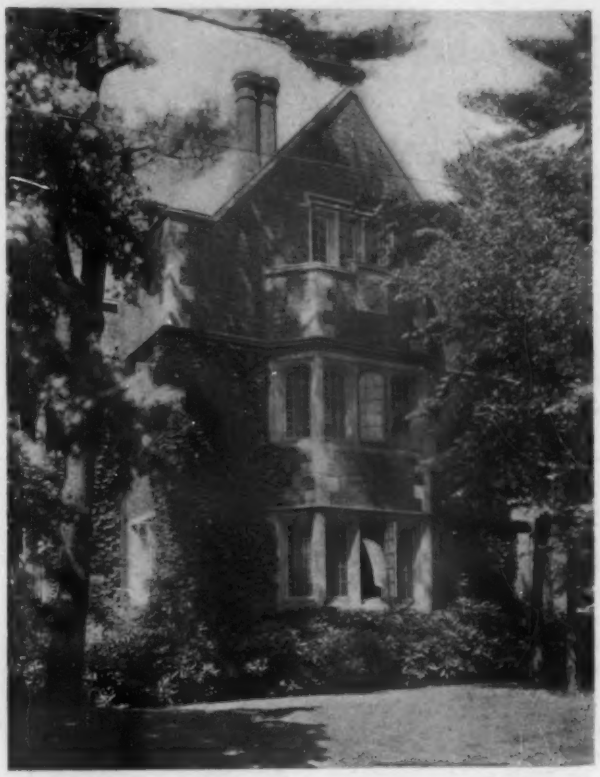


liked." To be sure, West Point, impelled by such a remarkable conjunction of minds as President Roosevelt, Secretary Root, General Mills and Colonel Larned, not to speak of the other civic and military personalities who worked with them, had begun precisely this process of regeneration, but the civil institutions of learning were quiescent, controlled perhaps by the convictions put into words by the distinguished president of a distinguished university when urged to advocate the preparation of a general plan for his stylistically diversified alma mater, to the effect that "he did not believe in prejudicing the future."

Fortunately this curious superstition had been outgrown at Princeton. The "go-as-you-please" method of designing and placing buildings was abandoned when the Pyne Library was designed by Mr. Potter, at the donor's insistence, in a somewhat modified type of "collegiate gothic," and Blair and Little Halls—the magnificent rampart of exquisite Tudor design that defines the campus to the west—had been created by two ever-to-

be lamented men who did so much to redeem scholastic architecture in America, and whose untimely death was a loss irreparable—John Stewardson and Walter Cope. After this there was really no going back. These buildings had done their educational work, and so effectively, that the authorities voted that for the future art in Princeton should be a duty and not a variety show, and that anything done hereafter should be in the style revealed by the Library and Blair and Little; the style fixed forever by Oxford and Cambridge, Winchester and Eton; the style that education and learning had made their own and held for two centuries a bulwark against the tide of the secular Renaissance; the style hewn out and perfected by our own ancestors and become ours by uncontested inheritance. So came Mr. Morris' altogether lovely '79 Hall in its good red brick and slim limestone mullions and varied sky line, marred only by its impossible red roof and its occasional errors in scale; also his Patton Hall, which might have been so good if the casements had only been of metal instead of wood painted white, and if there had not been a fatal error in the matter of the stone surfacing, which is of that lamentable "rock-faced" variety, a last lingering heresy from the misunderstood dogmas of that immortal genius, H. H. Richardson. Came also Cope and Stewardson's gymnasium, Parish and Schroeder's Dodge Hall, and Mr. Gildersleeve's quite perfect bits of half-timber work in Upper and Lower Pyne, and his vast McCosh Hall, brilliantly conceived, failing only in point of scale.

SEVENTY-NINE DORMITORY PRINCETON UNIVERSITY

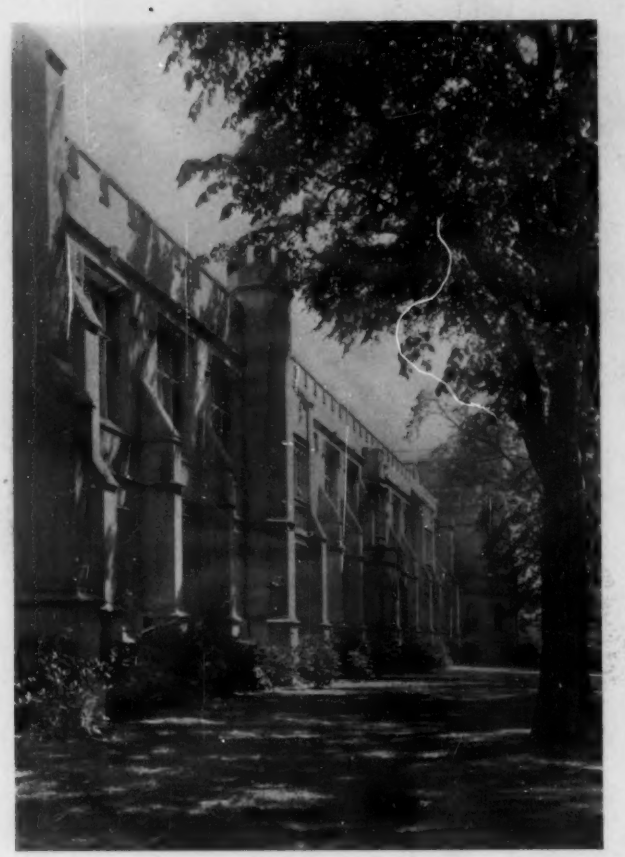


SEVENTY-NINE DORMITORY PRINCETON UNIVERSITY

Thus far, while the style had been well maintained, the several buildings had been placed pretty much at will, even by accident, but almost always intelligently and with a kind of sub-conscious impulse towards co-ordination. The old days when Witherspoon and Alexander, Brown & Dod could be designed as they were and placed as they were, were gone, but something was lacking, and the moment this want was realized and its nature perceived, the University took action.

This lack was manifestly that of a general plan, a project worked out on the broadest lines, calculated for a century of growth, fixed in its principles, but variable in detail as conditions might change or exigencies arise; a project that should, so far as possible, tie the anarchy of the past into the order of the present, "plant out" by carefully placed new work the aesthetic indiscretions of a munificent but misguided ancestry, and above all give through its unity and co-ordination a visible showing of the same qualities in the regenerated educational system.

It was then, viz., in 1906, that the University did me the distinguished honor of asking me to help its officials in the working out of the two ideals they already had established: stylistic unity and consistency of plan. The credit for neither belongs to me, I am sorry to say, for from the time the Pyne Library and Blair and Little were built—long before I came on the scene—there was no escape from either. What I had to do was to show as best I could how these ideals might be put into material form. Just before I took charge as Supervising Architect Mr. Hardenburg had been given the Physical Laboratory to build, Messrs. Parish and Schroeder the combined Geological and Biological Laboratories, and the

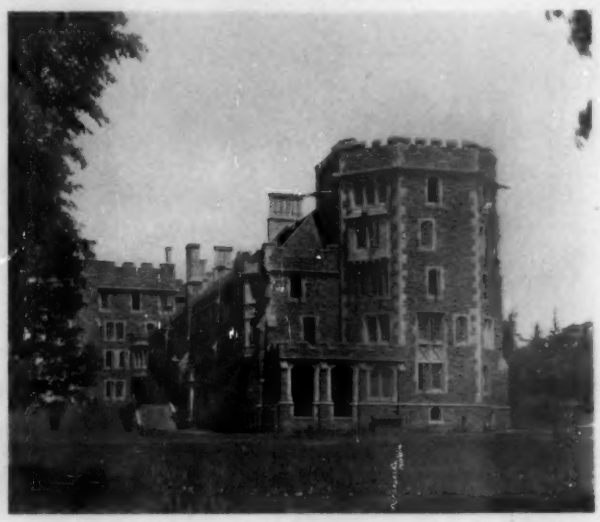


McCOSH HALL PRINCETON UNIVERSITY

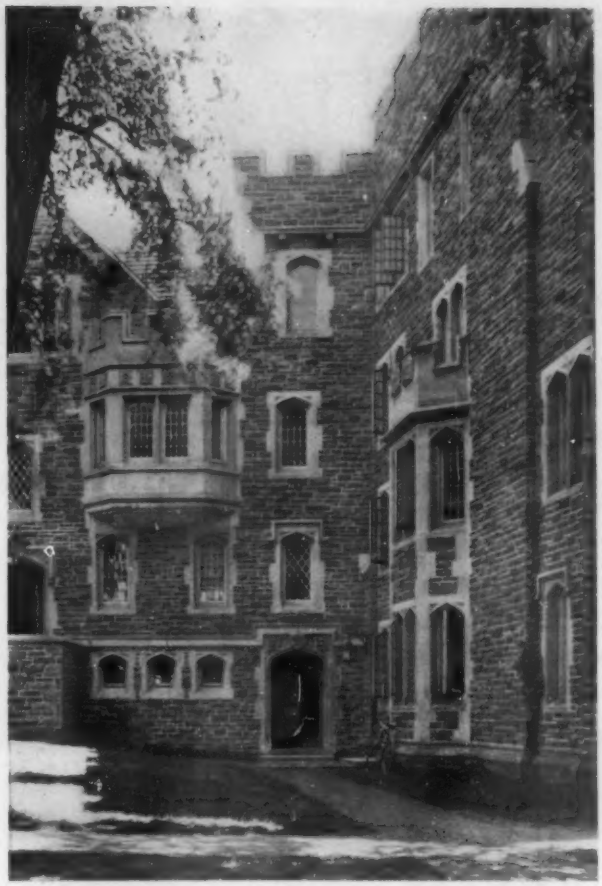
general site determined upon. The first blow for unity was struck here and with the hearty coöperation of President Wilson and the Committee on Grounds and Buildings under the chairmanship of Mr. Archibald D. Russell. These laboratories were so arranged on the sloping ground to the east of Prospect that at some future time extensions and additions will tie them together into a huge group of science buildings around a great quadrangle terraced from north to south. Both buildings are now finished, the former holding closely to precedent in general mass and composition, rich and effective in color, with some admirable spacing of ornament in the gables, failing chiefly in the scale of the detail at the entrances; the latter being a remarkably vital and clever adaptation of Tudor forms to an extremely difficult problem. The mass and composition are brilliantly effective, and in view of the rigid requirements of the departments it is hard to see how more successful results could possibly have been achieved.

The great question, however, was the general plan. Everything hung on this, and no new buildings could be placed until its main dispositions were determined upon. The situation was not a simple one. To be sure it was less complicated than that offered by Harvard or Yale, where the chaos of styles passes belief, and the crowding of mutually inimical structures makes only a cataclysm æsthetically operative; still, Princeton had grown on the old individualistic lines, and from the sacred "Old Nassau," built of tawny, rough rock in the unimaginative but quite inoffensive fashion of Colonial days, confronted by two white marble "near-temples," with a red sandstone Gothic library on the one hand and the nondescript Reunion on the other, to the wildly and improbably Romanesque Alexander, the Kubla-Khan fantasies of Witherspoon, the party-colored Renaissance of Brown and the Art Building, and finally to the varied yet always beautiful works of the new Gothic dispensation, the range was sufficiently wide for the taking of careful thought. In the matter of disposition conditions were better. Of course it was the old "park scheme," each structure plumped down on its "squatter sovereignty" site, quite self-contained and self-satisfied, with no suspicion of such a thing as team work, but there was almost no crowding. Only one building—Dod Hall—had been placed with a malignant defiance of law and order. The old Campus was a real one, and a major and a minor axis existed, at all events *in posse*, while the Front Campus, McCosh Walk and Prospect, with their wonderful trees were enough to redeem a setting a thousand times worse. Princeton was spacious and Princeton was splendidly scholastic in its atmosphere, already more like Oxford and Cambridge in its appeal than any other American university I have seen, while it was joyfully free of the secular shoulderings and encroachments of Harvard and Yale, Columbia and Pennsylvania. The new ideals could be realized, there was no question about that, and without the drastic surgical operations or the cataclysms of nature that are necessary elsewhere.

In fact the general plan grew straight from the conditions. Certain psychological principles were laid down at once, and these may be interesting. First of all, an university was conceived as a place where the community life and spirit were supreme, the rest secondary; a citadel of learning and culture and scholarship, at the same time inclusive and exclusive, containing within itself all necessary influences towards the making of character, repelling all those that work against the same; a walled city against materialism and all its works, with a "way out" into the broadest and truest liberty; the heir of all the scholarship and culture of the past, its line of succession reaching back without a



PATTON HALL PRINCETON UNIVERSITY



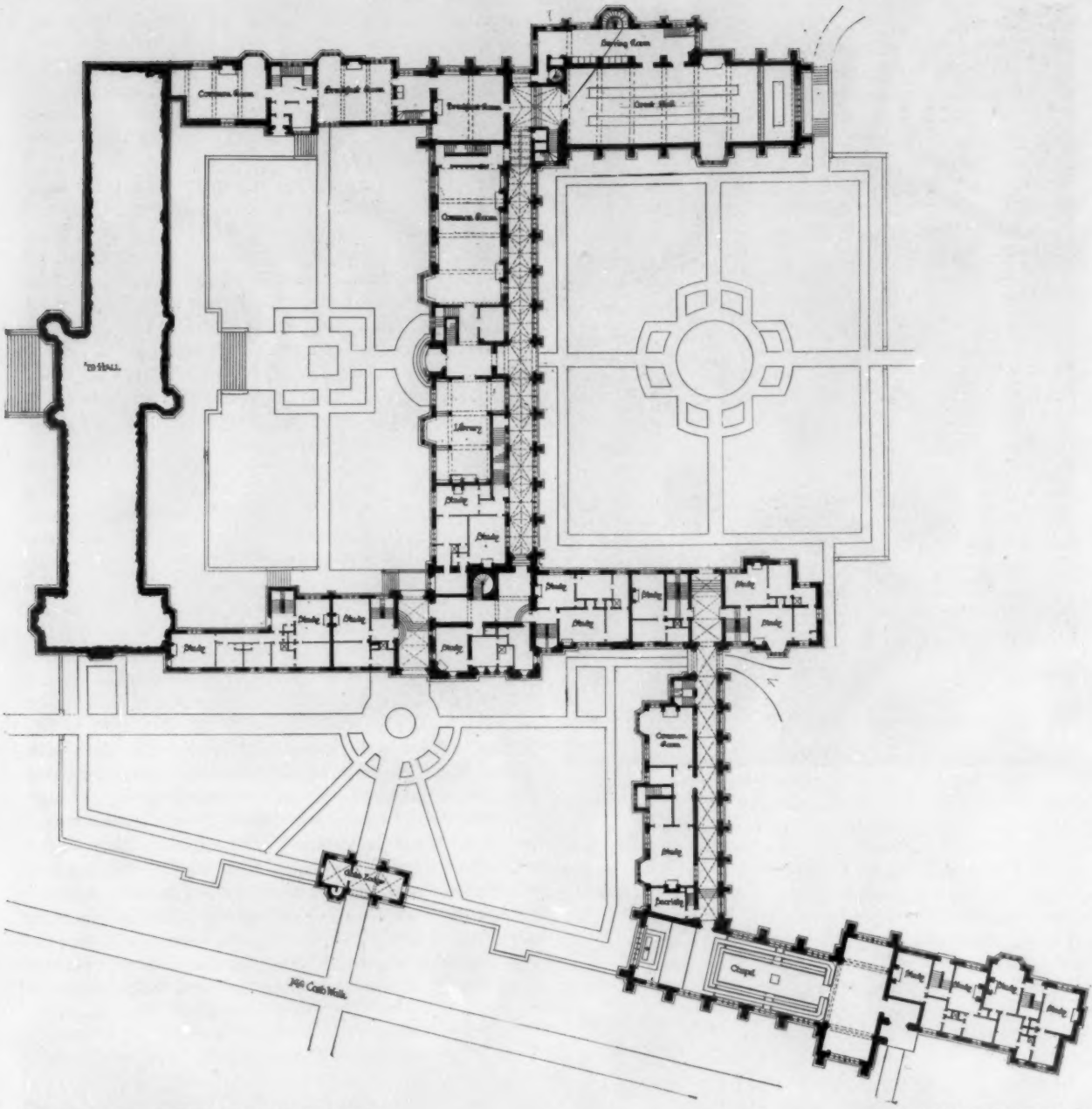
PATTON HALL PRINCETON UNIVERSITY

break through Oxford and Cambridge, Padua and Paris, Bec and Rheims, Salerno and Salamanca, to the schools of Athens—and further. From this it followed that concentration should supersede diffusion; that the limiting lines should be fixed, and gradually built up until they walled off from without a sanctuary free of the incursions of automobiles, "seeing Princeton" vans and motor cycles, and measurably exempt from the ingratiating approximations of the tripper, the tout and yellow journalism. Also that ultimate unity should result from a congeries of subordinate units, individual buildings being connected up with each other, in many cases forming "quads" (the word is used architecturally and without any hidden meaning) which should form the various nuclei of residence; that the whole setting out should not reveal itself at once and from any spot, but gradually, through narrowed and intensified vistas, the unforeseen opening out of unanticipated paths and quadrangles, the surprise of retirement, the revelation of the unexpected; that in all this concentration there should be no crowding, no loss of light and air; that the scale of open areas should be so devised as to enhance the effect of the buildings themselves instead of merging them in a sea of emptiness; that at least one great "way out" should be opened at any cost, clear to a blue distance of hilly horizon; finally, that in some way should be obtained the scholastic suggestions, the evocative impulse of Oxford and Cambridge, the sense of unshaken tradition, one with that of the great universities of our own blood and temper.

The general plan shows the efforts thus far made towards the achieving of all this. The old campus is treated as sacred, never to be touched by man, the buildings and the Cannon fixed forever; unchangeable, except that West must lose its mansard roof, Reunion give place to something a shade less annoying, Nassau gain a simple Georgian portico fronting those of Whig and Clio across the campus. Due south from Nassau, between the latter buildings, is to open the "way out," the broad, unbroken vista of green turf and double rows of English elms, stretching away across an university park to Lake Carnegie, and so to the far horizon. Between Whig and Clio is a wide flight of marble steps, and a terrace as a base for the latter buildings, and on these steps a statue that shall symbolize the University in its personal relation to every alumnus. South of this, the main axis is defined by a range of buildings on the east planting out the Art Building (and Brown, if possible), while to the west Dod, the interloper, is moved back forty feet, sunk one story, deprived of its roof, yellow chimneys and scaffolding of fire escapes, and bound over to keep the peace for the future. Fronting this main axis is the Chapel, large enough to accommodate the whole body of students and faculty instead of a moiety thereof, as is the case with Marquand, with a great central tower that forms, as does the Chapel itself, the focus of the whole group, symbolizing the sound doctrine to which Princeton has always held (in contradistinction to some others) that neither character nor culture reach their full fruition except when religion plays its due and potent part.

The main axis established, a cross line is necessary, and this grows up just south of the terrace of Whig and Clio, starting from a main gate on University Place, crossing the Campus to the point where it meets Mc-

PATTON HALL PRINCETON UNIVERSITY



TENTATIVE PLAN FOR THE GRADUATE COLLEGE PRINCETON UNIVERSITY

Cosh Walk, and turning thence to the north until it joins the road that enters the grounds from Nassau Street and leaves at Washington Road. The old drive north of Whig and Clio is abolished, a footpath taking its place, and in future vehicles will be excluded from the old Campus. As for the other drives, the one that now enters from University Road south of Campbell Hall is done away with, and a new line opened between Campbell Hall and the Sage group, and this, connecting with one from Nassau Street west of the First Church, forms the carriage approach to Alexander Hall, and passing around it turn south toward the Gymnasium, crossing the new drive south of Whig and Clio, and continuing to the Gymnasium, a college theatre opposite Brown on the other side of the main axis, and so to Elm Drive, where it cuts yet another east and west road struck through between the Physical and Biological Laboratories.

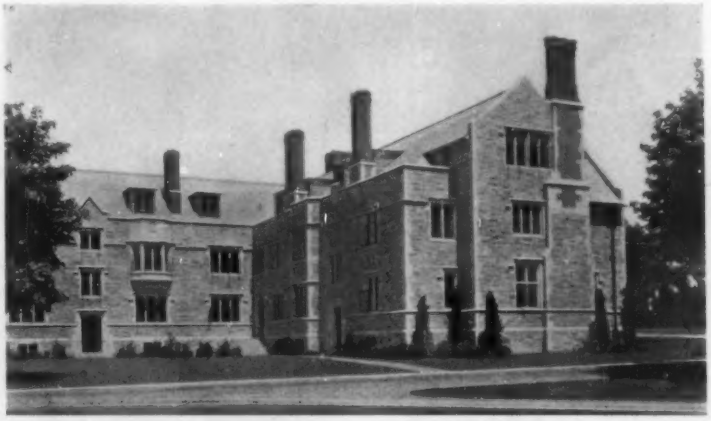
These main lines once fixed, the remainder of the work consisted largely in a composing of the different units into consistent groups, usually in quadrangle form, with due regard to a sufficiency of light and air, the preservation of all fine trees, and the affording of pictorial vistas, varied in their objectives, their framing, and in their light and shade. Generally speaking, the dormitories were segregated west of the old Campus, the Science buildings to the east of Prospect, with an assignment of space for Applied Science on the other side of Washington Road, while the lecture rooms, etc., are given the entire northeast quarter between the

PALMER PHYSICAL LABORATORY PRINCETON UNIVERSITY

Library and McCosh Walk. Some of this "filling in" is interesting; south of Whig and Clio, and on the left, the slightly unaccommodating Art Building is incarcerated in a group of courts that fill much of the space between the proposed new Chapel and Brown Hall, a portion of the new building being devoted to an augmentation of the department of Fine Arts and, if one is ever required, a School of Architecture. On the right, lateral wings are built west from Dodge Hall, which (with the drastic treatment to which it is some time to be subjected (may mitigate its severity and modify its contours, so forming with Blair Hall a series of minor quadrangles, while the Campus is to be determined on this side by the prolonging of West College south toward Edwards, and as far as the cross axis. Ultimately the Library may be extended until it joins with Dodge Hall, forming a new library court, and this, with the reconstruction of Reunion, will leave the great Campus, the heart of the University, clearly determined and defined, yet with many vistas opening out in as many directions.

The problem of Witherspoon, Alexander, Blair, West and Campbell is as yet unsolved, and must remain so (except by process of elimination) until conditions change in the future. It is difficult to see what can be done with the two buildings first named, so far as harmonizing them with any just scheme of scholastic architecture is concerned. Witherspoon might be shorn of its coruscating coronet of stars, and as for Alexander, English ivy and ampelopsis are an ever-present help in time of trouble; at best, however, the situation is unsatisfactory, and this area may perhaps best be left pretty much as it is until time makes possible more radical action than is now desirable.

One of the great and feasible reforms now under way is the transformation of the whole northwest corner of the Campus, now occupied by the ex-hotel in the hotelesque style of the eighties, and—until lately—by a somewhat diversified row of buildings on Nassau St., the old gymnasium and the observatory. Here the elimination of the old gymnasium has made possible the building of Campbell Hall (Cram, Goodhue & Ferguson, architects), and when the Observatory can be removed this will be continued to the extension of Blair, so completing a quadrangle closed on three sides and consistent in architectural style. As for the corner of Nassau Street and University Place, Mrs. Russell Sage has made possible the beginnings here of a great double quadrangle, largely for the housing of freshmen, which bids fair to be one of the most notable pieces of scholastic architecture yet built in the United States. I had the honor of nominating Messrs. Frank Miles Day & Bro., of Philadelphia, as architects for this group, and the brilliancy, the scholastic calm, and the Oxfordian quality, mingled with all that is best in modern architectural spirit and accomplishment, are notable indeed. If, as must in some way be made possible, this group is immediately completed, Princeton will possess a monument superior in many ways to the best of the work now being done in Oxford itself on sim-



SEVENTY-SEVEN HALL PRINCETON UNIVERSITY

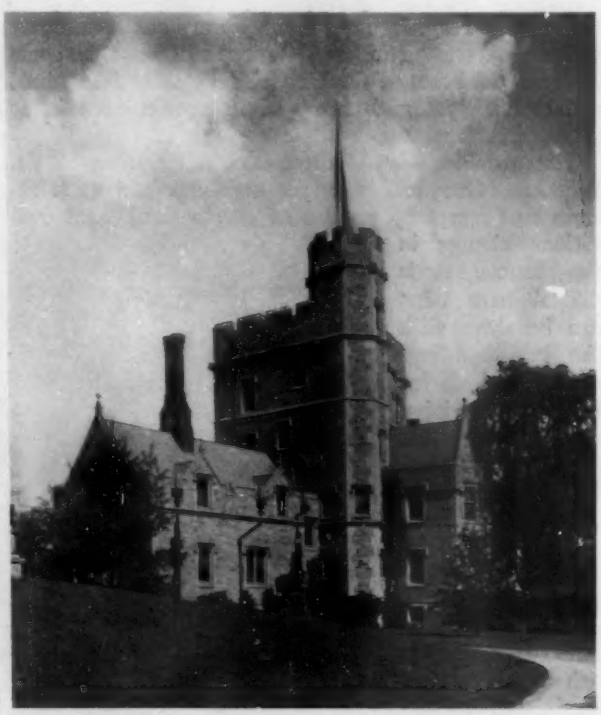
STAFFORD LITTLE HALL PRINCETON UNIVERSITY

ilar lines. In connection with developments at this point, there is now a project for a monumental tower gate connecting the University Place fronts of the Sage Group and Campbell Hall, extended, and sketches have been prepared suggesting in a measure the tower of St. John's, Cambridge.

At the northeast corner the plan proposes, of course, the extension of McCosh Hall to the north and then to the west, forming a great court of somewhat irregular shape, the centre of which will be the very beautiful replica of the Corpus Christi sun-dial given by Sir Wm. Mather, and now in place: Dickinson is frankly condemned, and some day its place is to be taken by a range of buildings parallel with the north front of McCosh Hall extended, which is to continue and more or less envelop Science Hall and then return to the west along Nassau Street as far as the public street that angularly cuts across the grounds at this point.

One of the hardest problems was that of the Graduate College: a sum of money was available for buildings, but, though large, it was quite insufficient for the purpose of obtaining even a beginning adequate in size and in architectural quality to this crowning feature of a great university. Legal difficulties and restrictions in the bequest hedged the whole matter with complications, and finally the easterly portion of the grounds of Prospect was recommended, not as ideal in every particular, but as conspicuously the best under the circumstances. It placed the Graduate College where it was always in sight of the undergraduate, reminding him that his degree is only a certificate enabling him to go on with those graduate courses without which collegiate training is incomplete, while the plans were so laid out that almost complete retirement and isolation were guaranteed the graduate students themselves. It gave the school the most beautiful site and environment possible in Princeton (which is saying a good deal), with immemorial trees and quiet, old world gardens: it filled up an awkward hiatus between the Physical Laboratory, Seventy-nine, and McCosh Halls, tying them all together in one composition and enhancing the beauty of McCosh Walk. On the other hand, the space was too restricted for any very great future expansion, and there was the fear that the Graduate College might crowd too closely the President's house. Still, as matters stood until recently, the site seemed the best under the circumstances, and it was indorsed by the several authorities, and work was pushed forward on the plans by the architects, Cram, Goodhue & Ferguson. On the general plan the Graduate College is shown on this Prospect site, and the old detail plan is published for the purpose of indicating the general idea and the maximum development possible on this particular site—a total accommodation of 150 men, including Seventy-nine Hall, ceded as living rooms for graduate students.

The Prospect site never commended itself to some of the highest authorities, largely because of its circumscribed nature, and recently offers of very large additional sums for buildings and endowment, which seem to open up far greater possibilities than had hitherto been considered, have resulted in a reconsideration of this question of site; therefore, at this time, no detailed drawings of the proposed buildings for the Graduate College are shown, as, should the site be changed, they will be wholly revised. They follow, however, the highest ideals established by Oxford and Cambridge,



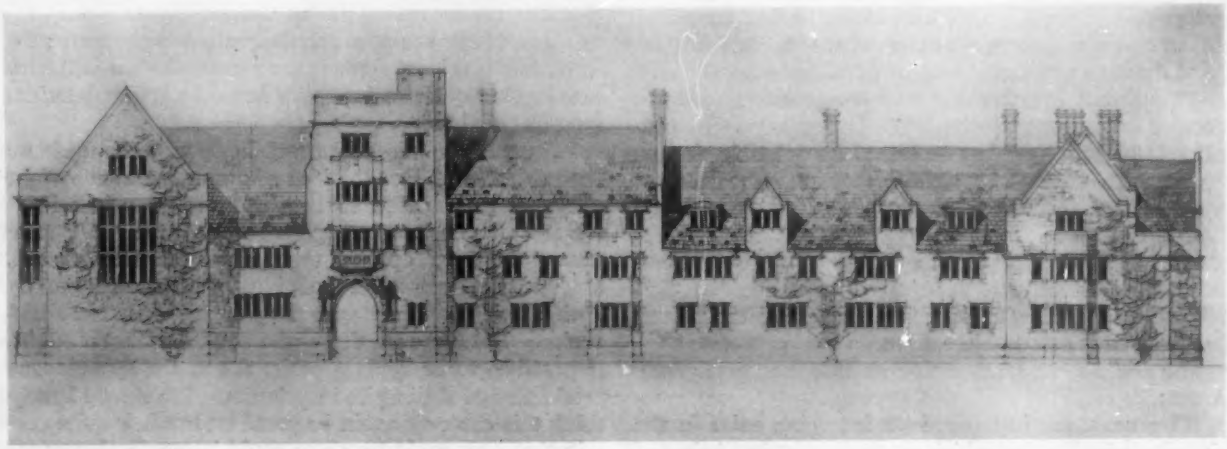
STAFFORD LITTLE HALL PRINCETON UNIVERSITY

EAST ELEVATION, FRESHMAN DORMITORIES PRINCETON UNIVERSITY

and should they be carried out on the Prospect site can hardly do other than vastly improve the architectural composition at this point as well as intensify the remarkable beauty of the gardens of Prospect, while, if a distant and ample site is chosen instead, there will be the possibility of working out from the beginning such a group of quadrangles, cloisters, towers, halls, terraces and gardens as at present does not exist anywhere in the United States.

In addition to the just finished Physical, Geological and Biological Laboratories and Campbell Hall, with the Sage Dormitories and five or six additional "entries" along Nassau Street, forming an integral part of the great group of which Frank Miles Day & Bro. are the architects—and also the great Graduate College which will be begun as soon as the vexed question of site is set at rest—there are also in prospect the Eighty-four Tower, which may either link the Sage group and Campbell Hall or, possibly, form a part of the Graduate College, a new dormitory of five or six entries, and an extension of the Gymnasium for specific purposes. The "Princeton spirit" seems to do one thing, at least, and that is to loosen the purse-strings of every alumnus, for the amount of money that has been given during the past four years for buildings, equipment or maintenance, is probably larger than in the case of any other university in America, whatever its size. To this overflowing generosity is due the facility with which Princeton is transforming itself architecturally, and if the drift of funds in this direction should continue at the same rate it will be a few years only before the general plan is materialized in every detail.

What the Committee on Grounds and Buildings and the Supervising Architect are trying to do is just to express in adequate architectural form the lofty ideals of character, education and scholarship put forward by President Wilson, Dean Fine and Dean West, and so efficiently carried out by the whole faculty with the enthusiastic coöperation and endorsement of the trustees. Princeton stands for a very coherent and consistent ideal, and this can be expressed with exactness by architects, and all other artists who work at her command, for this is the primary function of all art. There is nothing diffuse, casual or individualistic in the Princeton idea, but all is highly coördinated, controlled by sound law, infused with the impulse of an indestructible tradition that transcends the limits of continents and of centuries. Looking at the matter as a rank outsider, I should say that Princeton was inflexible in her adherence to the everlasting standards of deep and inclusive education, scholarship and character, but almost infinitely adaptable, within these unchanging limits, to modern conditions of time and race and en-



SOUTH ELEVATION, FRESHMAN DORMITORIES PRINCETON UNIVERSITY

vironment. To express this it was decided that one style should be prescribed and adhered to, and this the perfected style our own ancestors developed as the architectural expression of scholarship, at Oxford and Cambridge, Winchester, Eton and the other great schools and colleges of England as they were before the victory of the Renaissance, while the old and early American scheme of structural diffuseness, haphazard increments and self-centered individualism of parts should be abandoned for the elder and sounder ideals of unity, intimacy, coherency, coördination.

Such, in any case, is the governing idea of the University authorities, and such the method followed in fixing the lines of future development. It is on these lines that the Supervising Architect and those architects who coöperate with him in serving the University must work for the future.

ARCHITECTURAL COPYRIGHT

The question of architectural copyright has been vigorously taken up by the Royal Institute of British Architects, who in the person of a specially appointed committee have appeared before a committee of the House of Commons.

The Builder of London, in a recent article, discussing the desirability of some form of copyright that would protect the architect from the unauthorized appropriation and use of his ideas as embodied in his detailed drawings, states:

"The difficulty in dealing with the question of artistic copyright in architecture is that it is somewhat complicated with matters which are not artistic. As was said in a judgment given in Belgium—a judgment in favor of the architect, 'a distinction must be drawn in the architect's profession between the production which is a matter of current practice, and the production which, being the result of special study and exceptional knowledge, acquires thereby a character marked by individuality.' No one, as is elsewhere remarked, could prevent a man building a front with a door and six windows in it, because another house had the same arrangement. Whatever constitutes artistic design in a building is as proper a subject for copyright defence as artistic design of any other kind; but there may be considerable difficulty in deciding just where artistic design comes in. In most cases we can perceive where it does, but the legal drawing of the line may prove to be rather difficult, and we should imagine that each case would have to be decided on its own merits. We have always felt considerable doubt whether it would be possible for an architect to obtain copyright protection, for instance, for a special form of plan, considered as plan alone."

In a statement drawn up by Mr. J. W. Simpson for presentation to the committee of the House of Commons, this difficulty is recognized. He observes that "the utilitarian value to the public of the architect's work has been cited as an objection to its being protected."

The Builder, in commenting on this fact, pertinently states:

"If a man, for instance, invented some point in the planning of a hospital which was recognised as being of hygienic value, and was therefore better for the inmates of hospitals, public opinion would hardly admit that future hospitals were not to follow this plan because the architect had 'protected' it. That would involve an injury to the public health. There may, however, be an artistic element, an element of fancy and invention, in mere plan as such, and where that exists it could, we think, be made a subject of copyright; but in this case again, it would be difficult to say definitely when the artistic element in plan did or did not exist."

The hardships that the architect is obliged to suffer and submit to are aggravated by the fact that he has at present no legal way of preventing the appropriation of his ideas.

The Builder cites the two classes that are particularly flagrant violations of the architect's rights in this matter of piracy. We quote:—

"The hardship to the architect under the present state of things is specially felt in two classes of circumstances. One is when a house, perhaps, which he has erected in a country neighborhood, and which has been regarded as picturesque and pleasing, is laid hold of by some speculating builder and reproduced mechanically, generally with inferior detail, not only to the annoyance of the original designer, but to his probable pecuniary loss, since he might have been asked to carry out other houses in the same style. This kind of thing is not, in fact, confined to speculating builders. We have frequently received letters from people about to build a country cottage, asking whether we had published any nice designs of that kind which would meet their case; to such we have always replied that architects' designs were not published in our pages in order that they might be made use of by our readers without consulting the architect.

"The other set of circumstances are those which refer to the architect's property in his own drawings, a subject on which we have before spoken strongly. The case for the architect could hardly be put better and more strongly than it is in Mr. Simpson's evidence, in which he shows that the architect is really in the same position as the sculptor; the sculptor makes sketches and models, eventually a full-size clay model, from which nearly all the work of copying it in marble is done by other workmen. The architect makes his sketches, designs, and full-size details, which are carried out by workmen under his orders. The original sketches are as much, morally, the architect's property as those of the sculptor are the sculptor's property; the latter fact is seldom denied; the former the law will have nothing to say to, so far. We hope the law may before long be enlightened.

"There is one general remark however to be made on the subject, viz., that the idea of architectural copyright pre-supposes the view that architecture is an individual art and not, as it once was, a national one. We have always been of opinion that, since the Renaissance, architecture became an individual art, carried out by each special architect according to his own taste and choice. But there are those who still think that it ought, if possible, to be again a national art, the spontaneous production of the inspired workman. We should hardly think this can ever again be possible; but it is quite certain that if it could be, there could be no further question as to architectural copyright."

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TO the heads of schools, universities and institutions of learning generally we commend for careful consideration the suggestions contained in Mr. Cram's admirable article published in this issue. While perhaps there may appear to lurk a trace of disrespect or ingratitude in the act of screening from view a building which, although the generous gift of some respected well-wisher of the institution, is so badly designed or unfortunately located as to be incapable of adaptation to an harmonious scheme, it is ordinarily wise to concern ourselves more with the general weal than the individual feelings. Of course, still better would be the complete removal of any structure interfering seriously with a comprehensive and carefully studied plan; but where this is conceded to be impossible the alternative of rendering the obstruction as unimportant and inconspicuous as possible seems highly desirable. In the newer institutions the prime importance of securing an adequate plan that will ensure not only an attractive ensemble, and afford convenient access and communication but provide for future development, has very often been realized; but in the case of some of the older universities and schools these matters received but scant attention. It appears most regrettable that vast sums of money have heretofore been expended in the erection of memorial halls, dormitories and gymnasiums on the grounds of some of our most cherished institutions without regard to an ultimate scheme of development. In the absence of competent architectural supervision, the varying styles of architecture and the promiscuous locations of buildings constitute in effect a challenge to the professions of culture, refinement and taste of the institutions.

PERHAPS the lesson has now been generally learned, but if not, a knowledge of the difficulties and expense incident to but a partial overcoming of early mistakes should go far toward preventing their further perpetration. It is not too much to say that the university that does not present to its student body a fair appearance architecturally is neglecting one of its greatest opportunities to instil in its undergraduates a knowledge and appreciation of architectural form and detail that would add to their enjoyment of life and to their usefulness as citizens. A realization of this fact will probably prevent any future work of importance in connection with either the rebuilding or enlargement of one of the older universities, or the establishment of a new one without entrusting the project to a supervising architect of experience and ability. His duty it will be to evolve a comprehensive general scheme, meeting the many and difficult requirements of the present and providing as far as can be anticipated for the demands of the future.

WHILE a calamity long threatened sometimes comes almost in the nature of a relief to nerves overstrained, it must be admitted that the revised Building Code, passed by the New York Board of Aldermen last week with a bare majority of two votes, scarcely affords this small measure of solace. Possibly our faith in the intelligence and upright purpose of the majority in public service, as elsewhere, is not always justified, but we had cherished a firm conviction that an instrument so obviously defective even to the point of being open to the suspicion of having been framed to favor certain interests, would never gain the approval of the Aldermanic Board. We confess an error of judgment; for, while the strongest kind of opposition was manifested, the measure now stands with the official sanction of that honorable body. The next move will place it before the Acting Mayor for his approval or disapproval, and on his action will depend not only to great extent the wellbeing of New York's vast building and development interests for the immediate future, but in large measure his own future political career. What an opportunity to commend himself to the really intelligent, disinterested, public-spirited citizenship! His action will in effect constitute a reply to harsh accusations, to adverse criticism and to numerous bitter attacks. Already he has made announcement that only after the most exhaustive study and examination will he act, and it is inconceivable that the new unscientific, unprogressive and unjust code can ever successfully pass such examination. Even without personal knowledge of the matter one could scarcely fail to be impressed by the very significant fact that the instrument submitted has been opposed with almost perfect unanimity by organizations and men unaffiliated with any special interests and who, from education and experience, are eminently qualified to judge of the wisdom and justice of the many and variously complicated provisions. When such men with hardly an exception pronounce the proposed code a step backward as regards scientific progress, it would seem advisable to ascertain whether the fact is due to nothing more discreditable than mere ignorance.

RED GUM FOR CABINET WORK

The lumber industry of the country has been provided with much valuable information by the investigations which have been made through the scientific study of many species of trees, against the use of which there has been a prejudice for one reason or other, and from an economic standpoint this is one of the most important phases of the Forest work of the government.

The latest discoveries of valuable qualities in a former neglected species resulted after an investigation of the red gum, sometimes commercially called "satin walnut," which finds its home in the hardwood bottom lands and drier swamps of the South, in mixture with ash, cottonwood, and oak. This tree is one of the commonest timber trees of the South, reaching its best development in the deep, rich soil of the bottoms, where it often attains a height of 150 feet and a diameter of 5 feet.

The best grades of red gum, clear heart, find a market almost exclusively in the export trade, though a small amount is used in the United States for inside finishing. Practically 75 per cent of the clear heart gum lumber cut in this country is exported for use in England, France and Germany, for the maufacture of furniture, inside trimmings, newel posts and stair railings. The commoner grades of red gum are used in the United States for cheap furniture, desks, the better grades of boxes and a number of novelties. The poorest grade goes into boxes, barrels and other articles for which short, narrow boards can be used. The inner portion of the hearts of the trees, which are of little value for boards on account of shakes and other defects, are usually sawed into 2 x 4 to 2 x 12, and sometimes 6 x 6 and 6 x 8-inch building timbers. These timbers have small values in the large markets, but near the mills the local trade exhausts the supply.

The chief objection to red gum is its strong tendency to warp and twist. This can be entirely overcome by proper handling. Were the lumber of high price this difficulty would probably have been considered and overcome long ago, and the wood used, but on account of its abundance and cheapness, very few operators have turned their attention to solving the problem.

The preparation of red gum lumber for any purpose should begin when the tree is felled. To guard against staining and warping, it is handled in much the same way as other woods, but with the important difference that the piles are narrower, so that the air may circulate freely, and thus prevent fermentation of the sap, and that the cross sticks must be placed close together. It has also been found well to place heavy weights on the cars of red gum when they are sent to the kiln. Every manufacturer of high-grade furniture and trim knows that, to secure the best possible results, the material must be redried when it reaches the factory. Some large users of red gum repile the stock after it has been carried a while, and bulk it down with cross sticks every five or six layers, so as to straighten out whatever twist there may be in the boards. This practically assures the elimination of twisting and warping. It can be handled in this way to much better advantage than where an effort is made to straighten it out by force when cutting up the stock and preparing it for use; for, when the pressure is applied gradually, there is no loss by reason of breakage or splitting. After having been dried and tempered in the air and then redried, it usually loses nearly all of its warping tendency. The cost of handling lumber in this manner is not great, and the good results secured thereby more than pay for whatever outlay there may be.

A plan which many furniture manufacturers have followed to good advantage and employed where red gum, oak, mahogany or other woods are used, is to design the article in such a manner that the wide pieces may be reinforced, and thus prevent any warping or other defects showing up. Instances have been known where red gum boards 18 inches wide have been glued together and made into 36-inch desk tops. The tops were firmly cleated on the bottom, held to place as well as any other wood and gave good satisfaction. This lumber had been standing on the sticks for about a year. Another manufacturer, who uses red gum for drawers and paneling, guarded against the tendency to shrink and swell by the application of a couple of coats of shellac inside and out, and found that the wood behaved itself as well as any that could have been used. In this instance, plain-sawed gum was employed, and plain-sawed material ordinarily gives more trouble than quarter-sawed.

When the work is properly performed and well-seasoned red gum is used, the results should be satisfactory in every way. The beauty of this wood should appeal more strongly to the American people in the future than it has in the past.

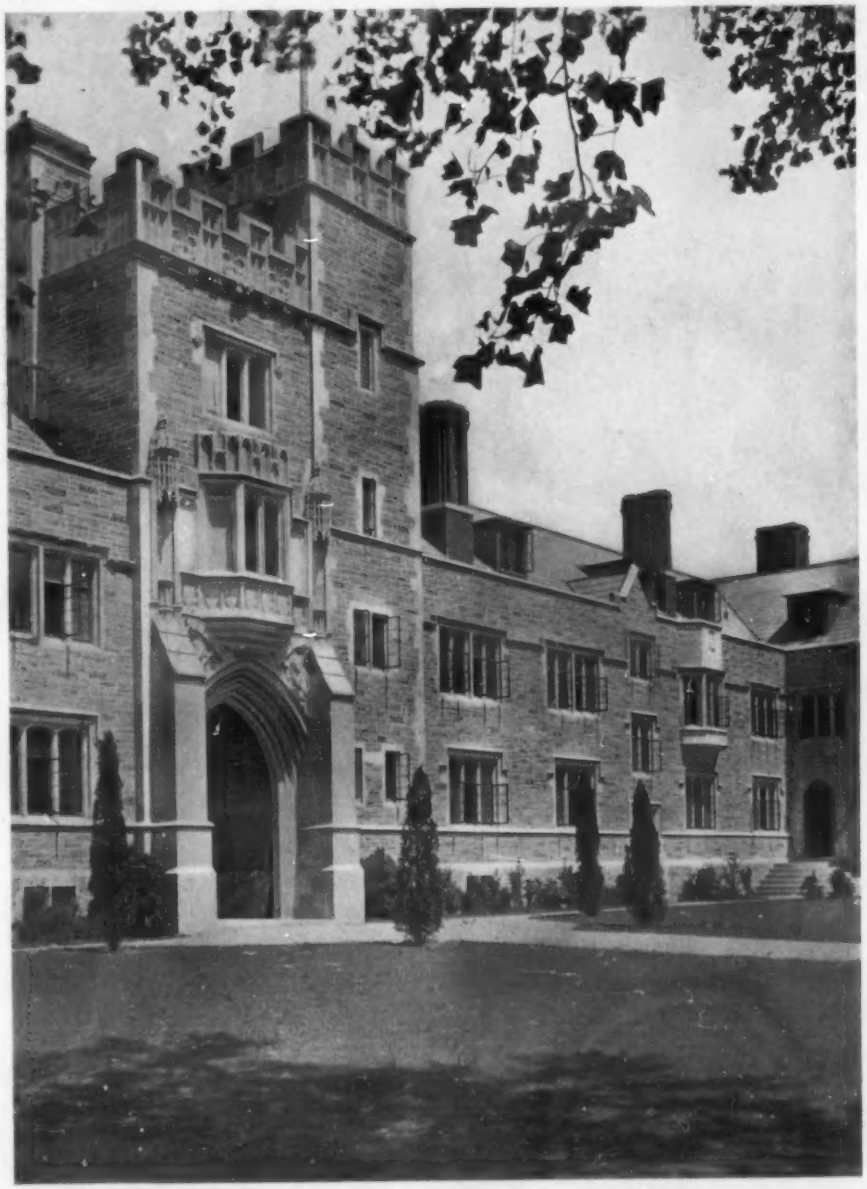
RECENT LEGAL DECISIONS

Liability for Delay in Completing Building

A building contract stipulated for a penalty of $150 a day while the work should be uncompleted after the date fixed for completion. A number of contracts, independent of the general contractor's, were let whereby a large amount of work was to be done and materials furnished by independent contractors, and their delay caused part of the general contractor's delay. The court held that the general contractor would be relieved from liability for the penalty, as it would not attempt to apportion the liability and say for how much delay the general contractor was liable.—Jefferson Hotel Co. v. Brumbaugh, 168 Federal Reporter, 867.

Amount Recoverable Where Contractor Wrongfully Discharged

Where a building contractor is wrongfully forbidden by the owner to carry out his contract he is entitled to recover the reasonable value of the work done and the materials furnished by him and appropriated by the owner, without diminution by any alleged damages suffered by the owner on account of the failure of the contractor to complete the contract according to its terms. Whatever damages ensue are the result of the owner's own wrongful act.—Moore v. Board of Regents for Normal School in Dist. No. 2 (Supreme Court of Missouri), 115 South Western Reporter, 6.



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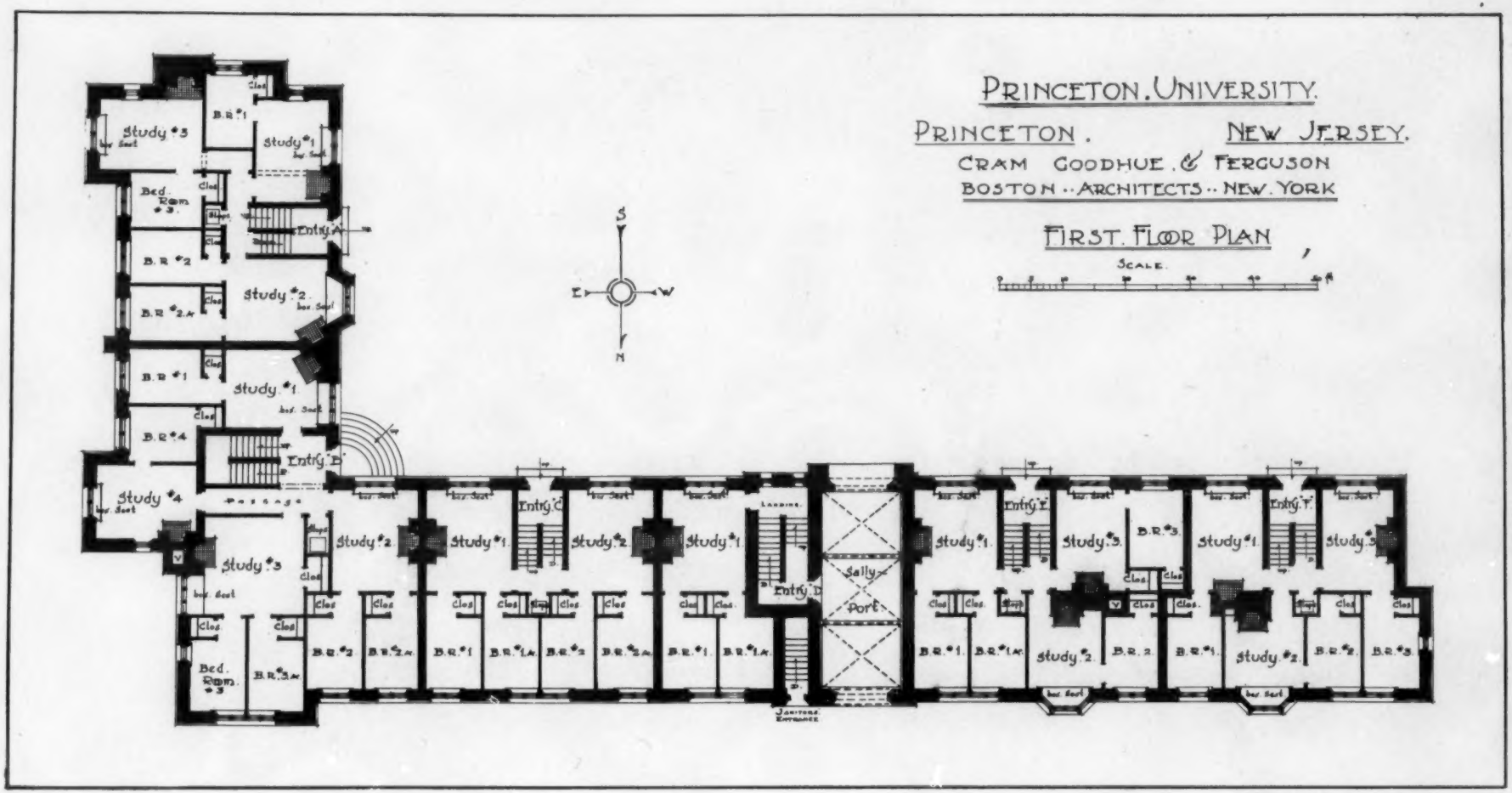

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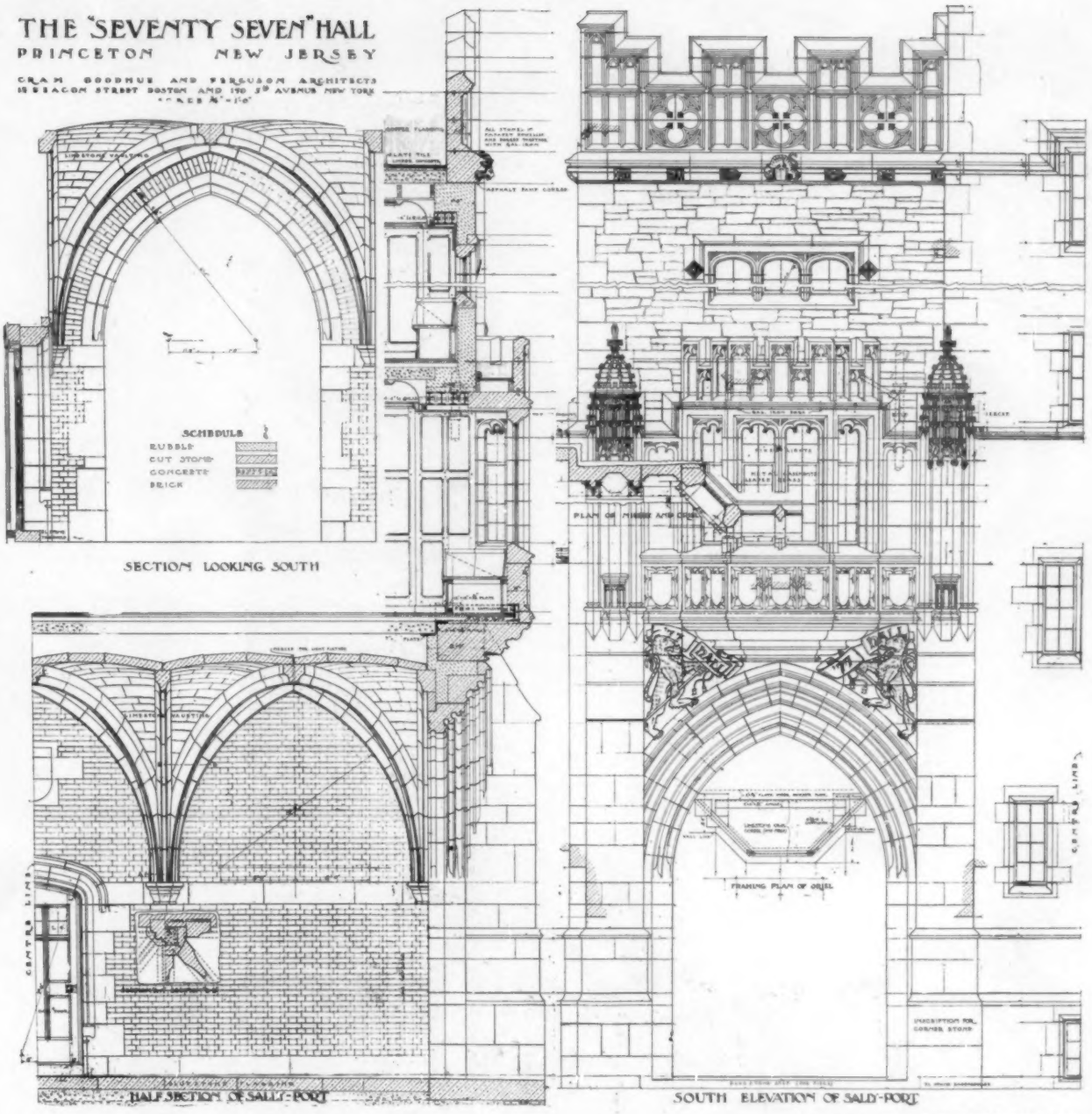

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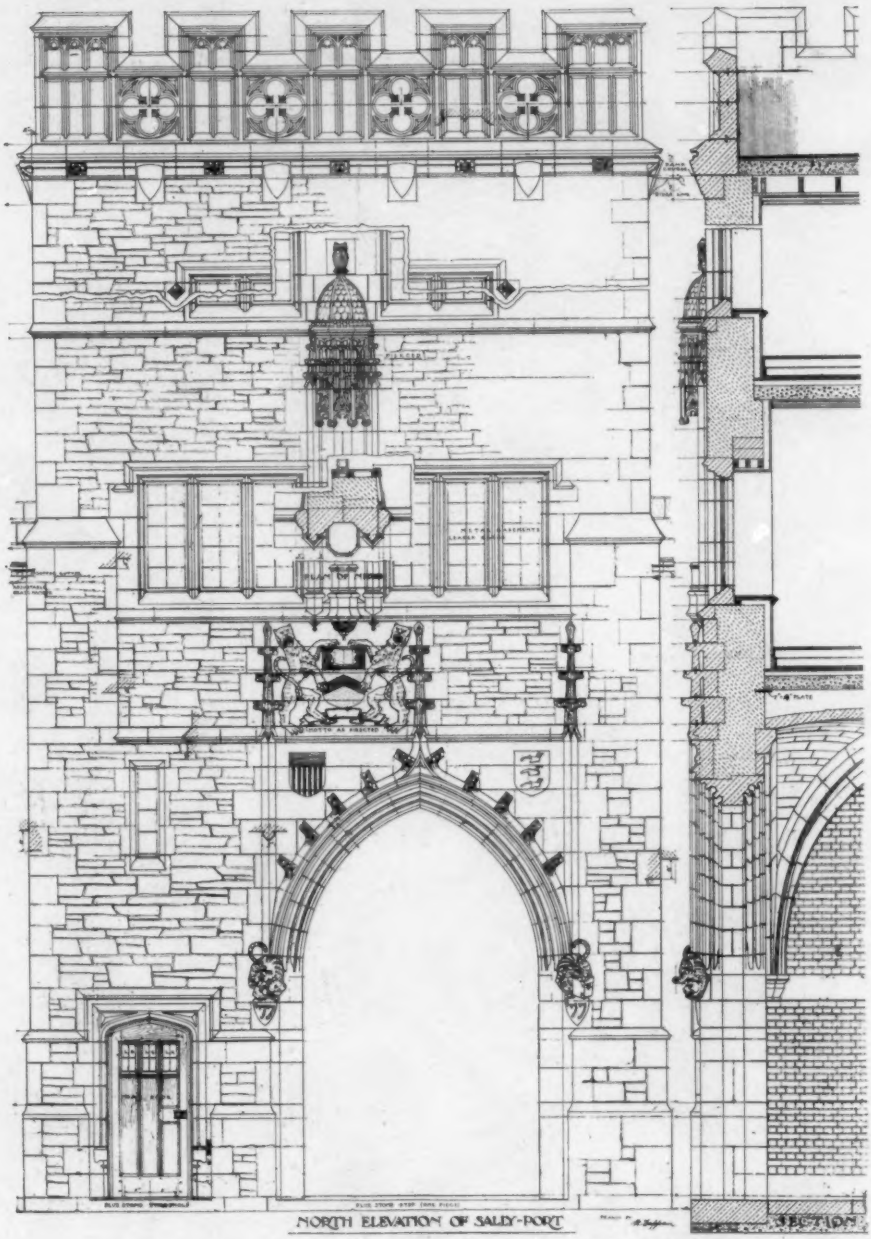

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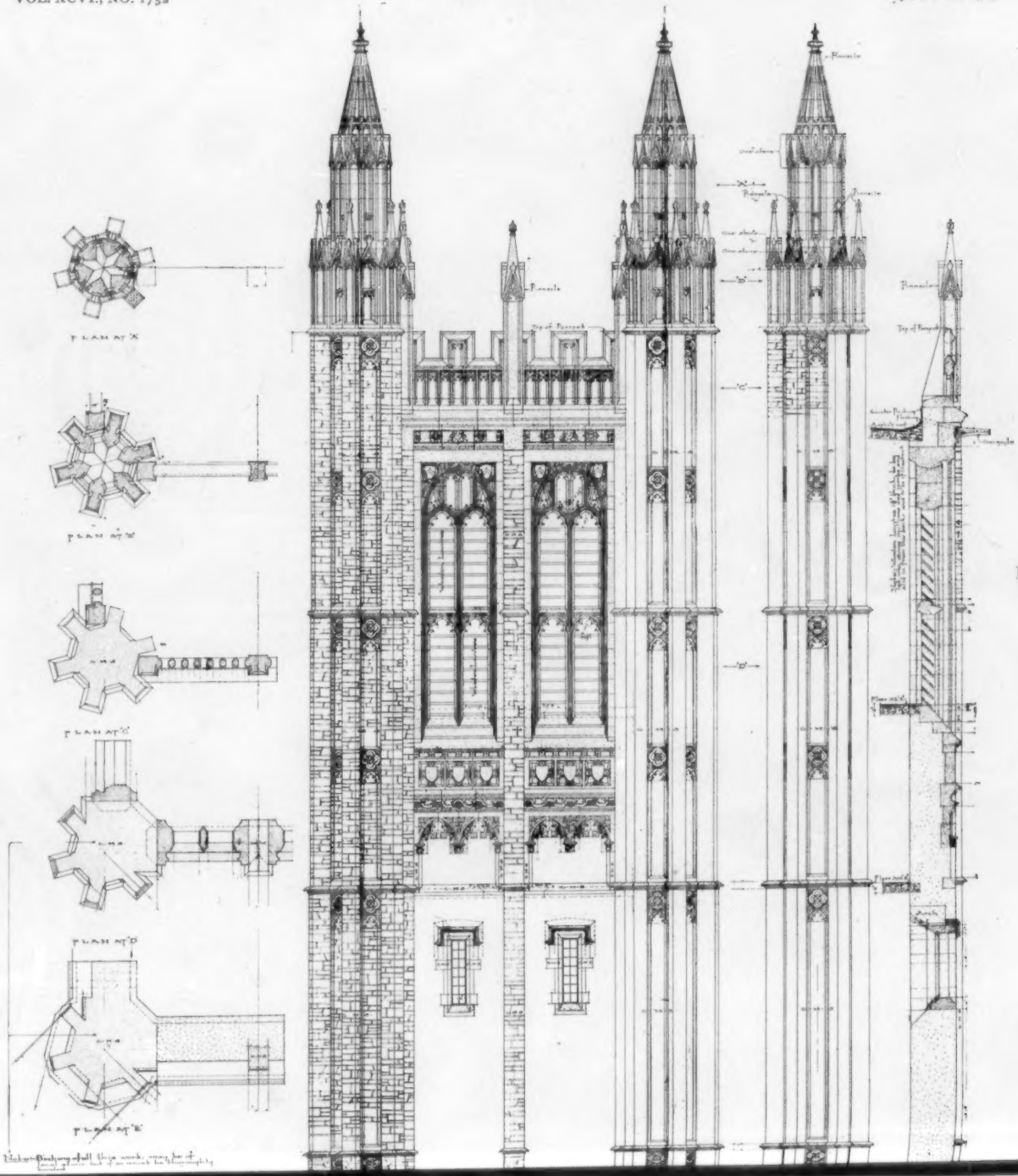

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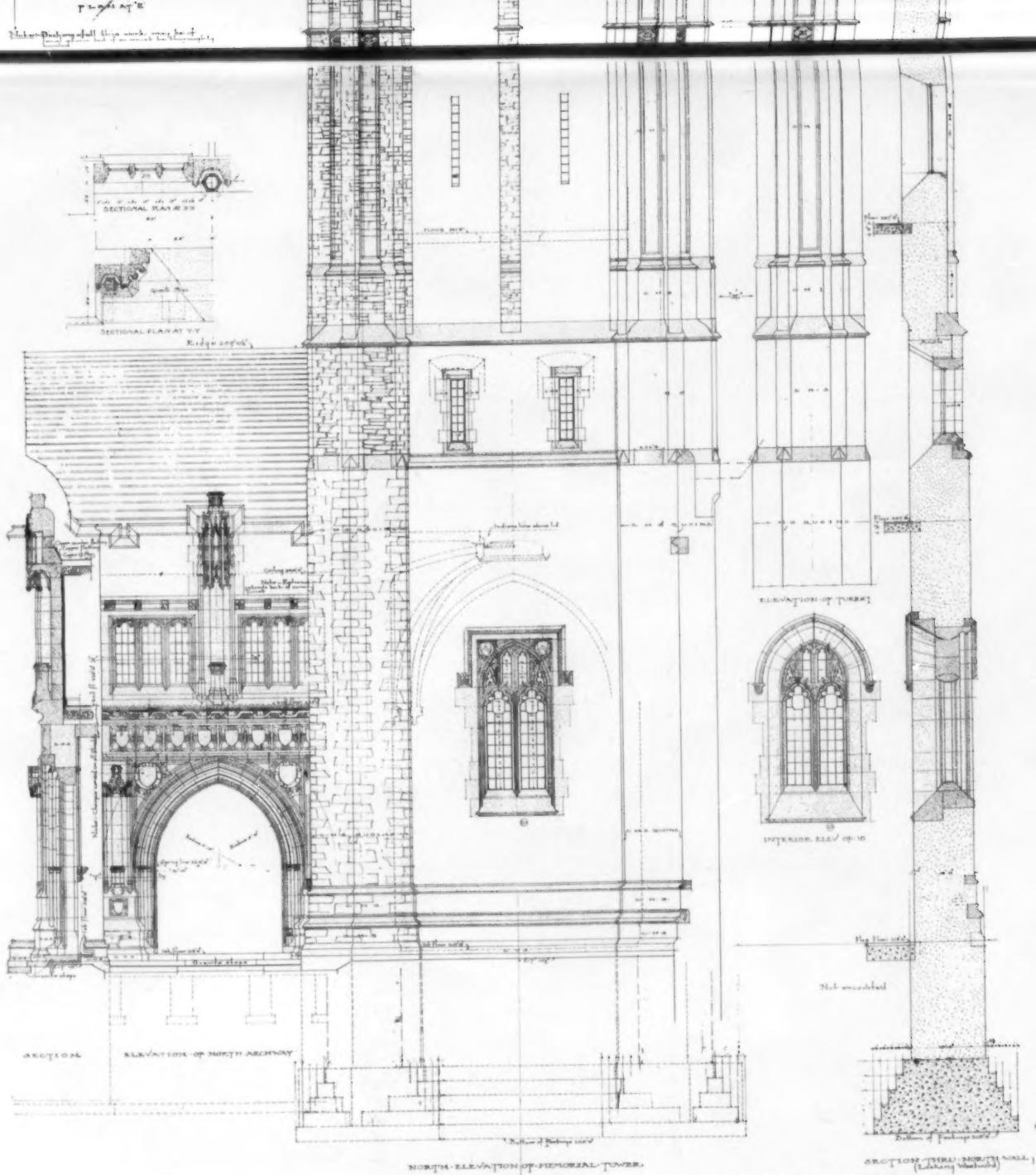

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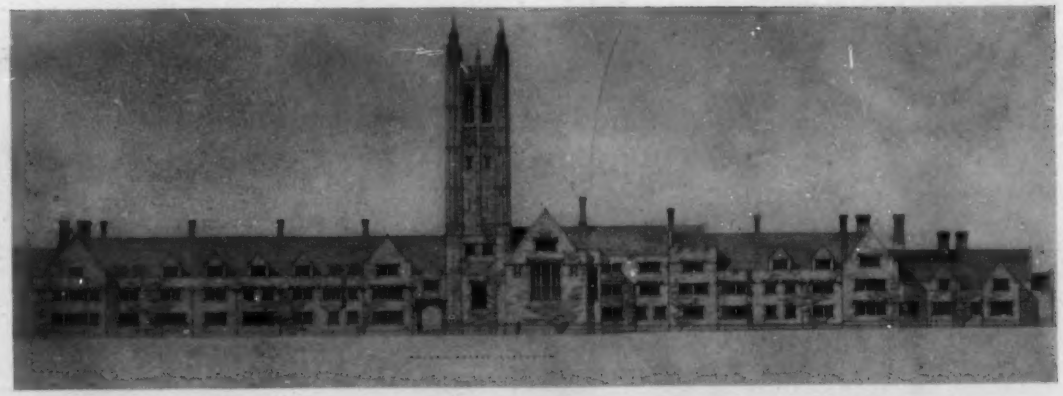

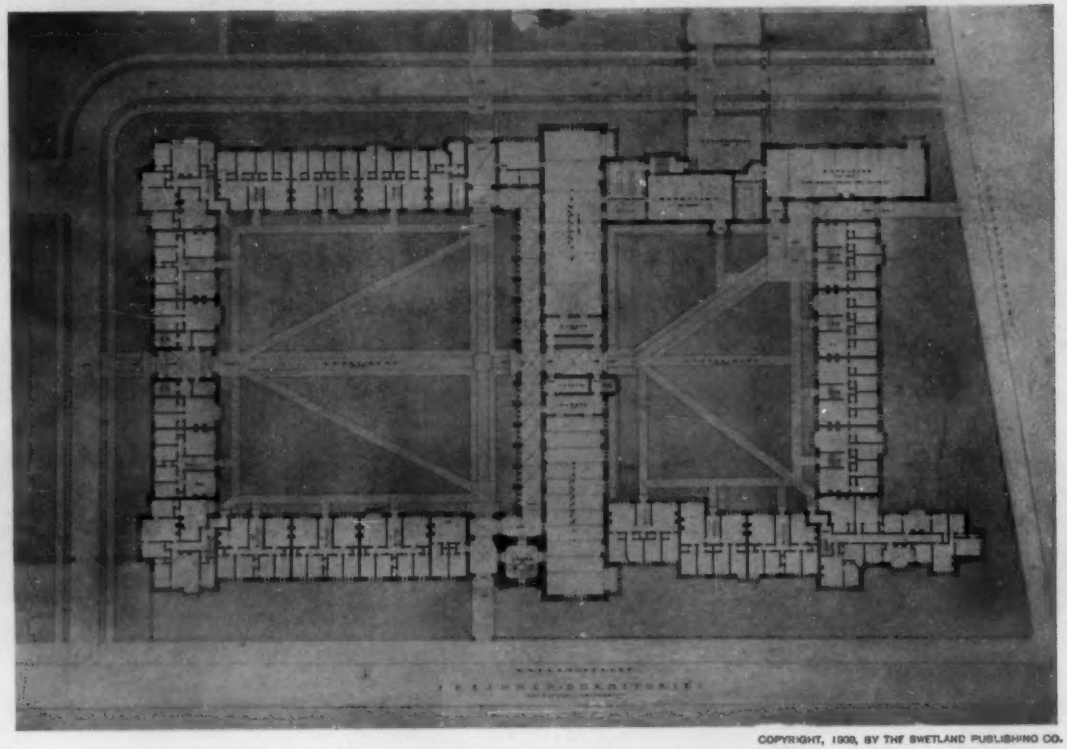

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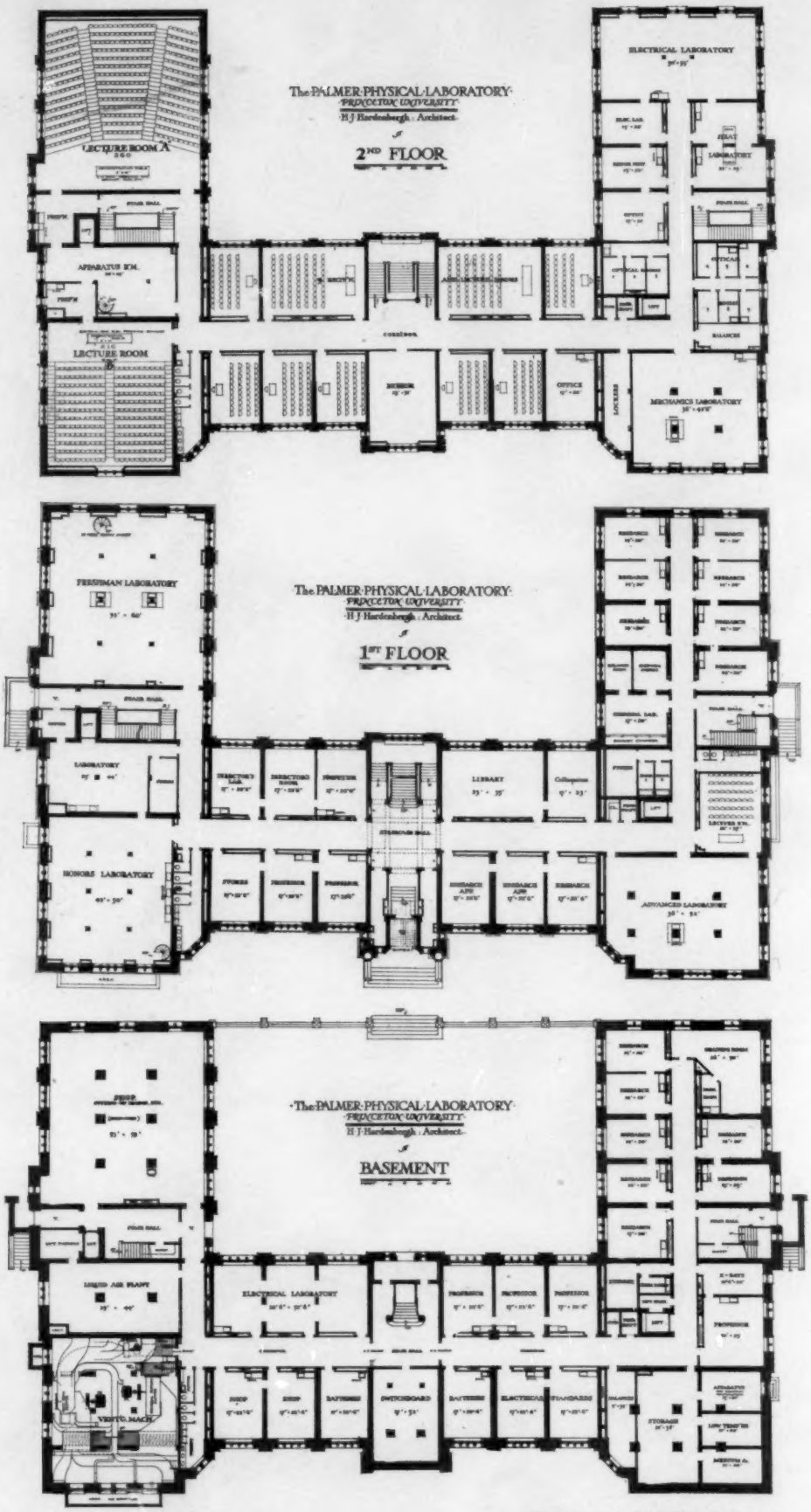

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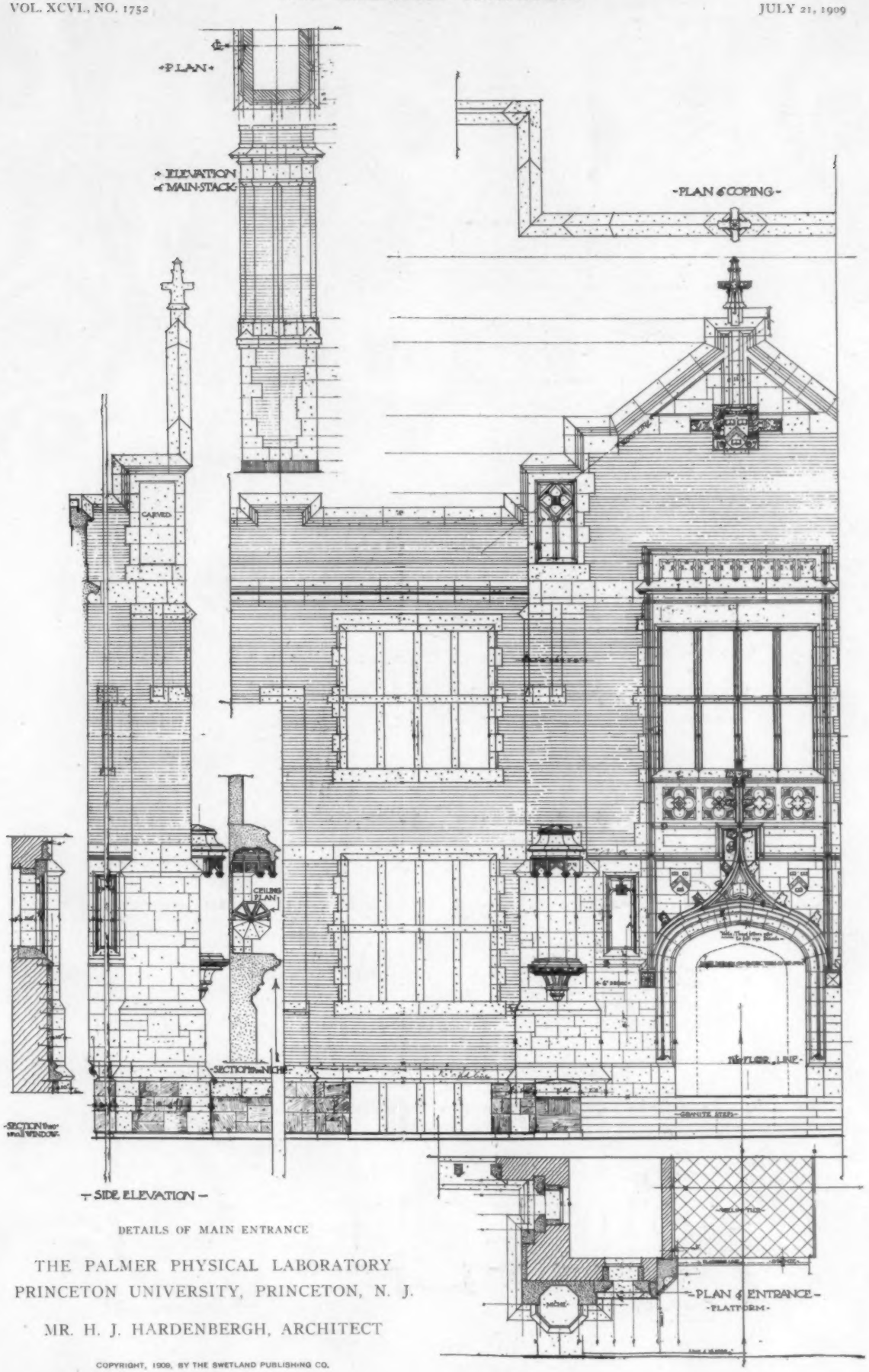

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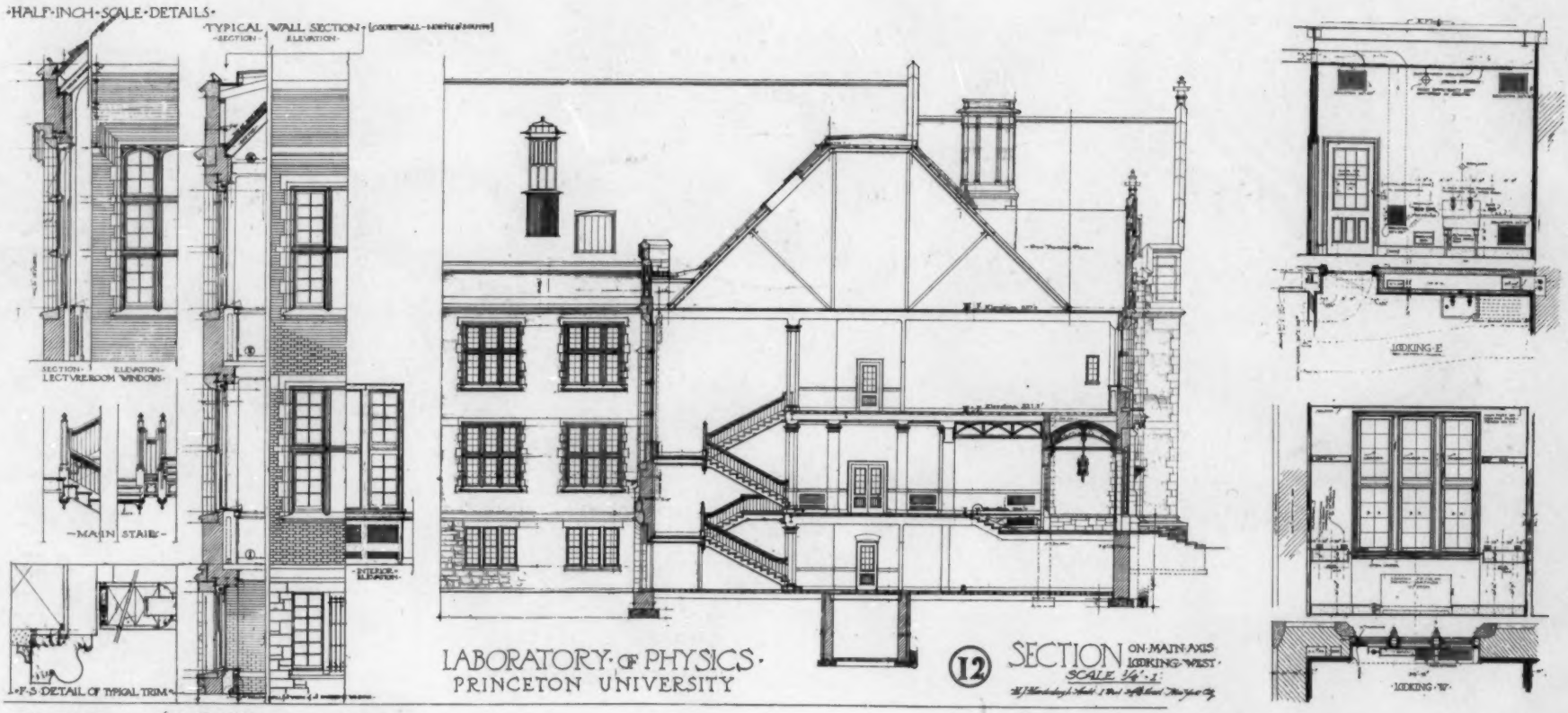

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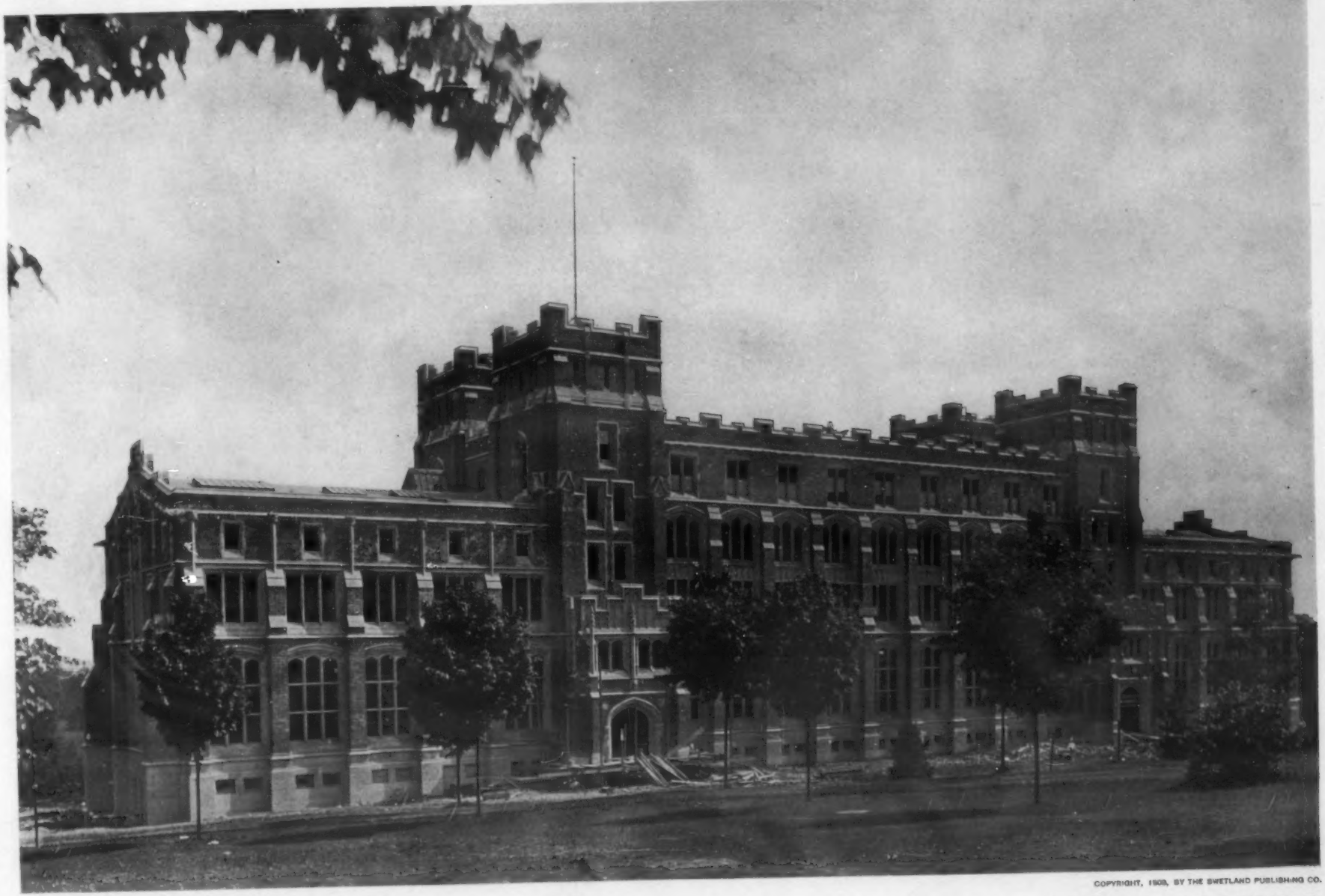

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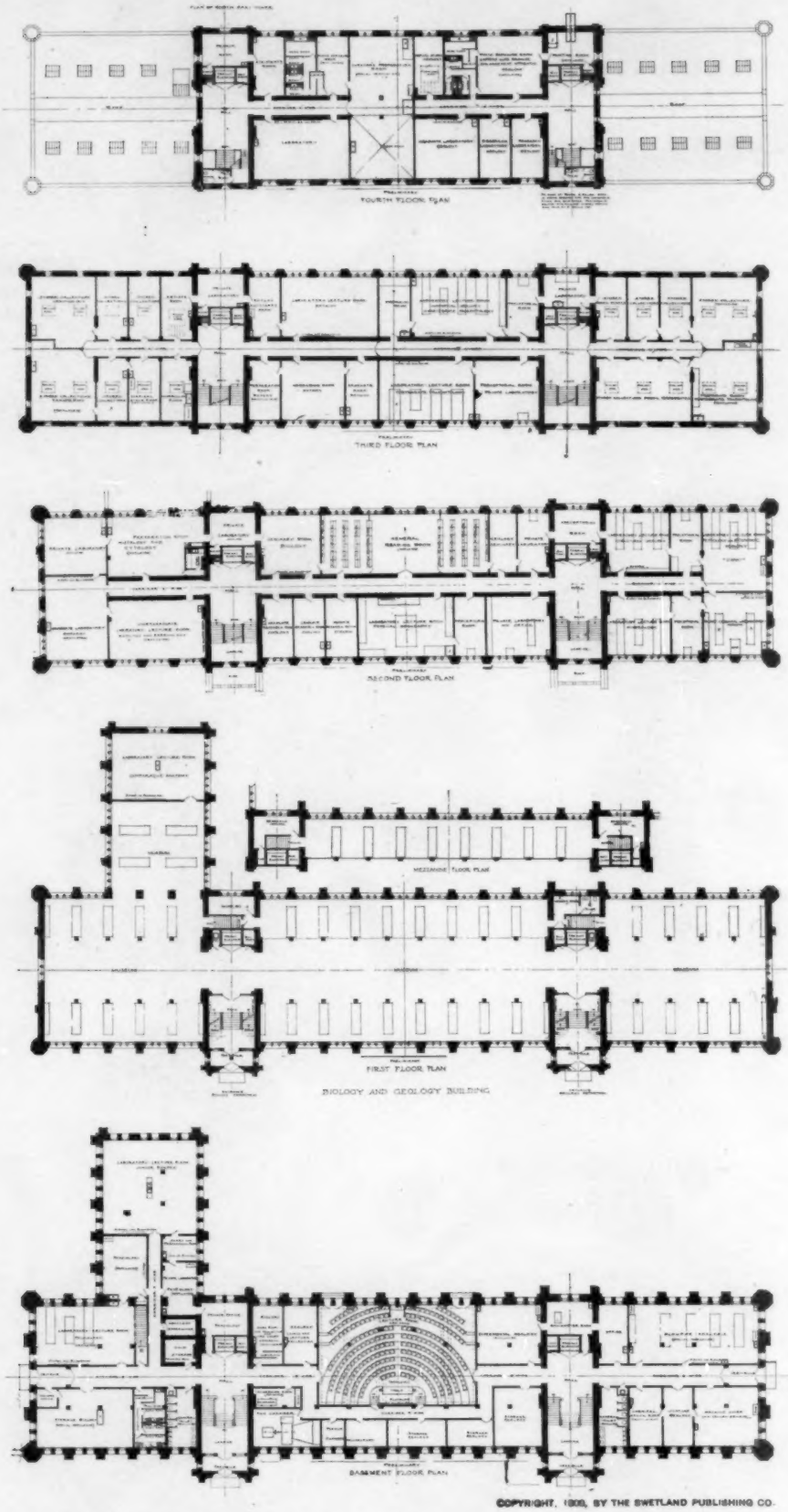

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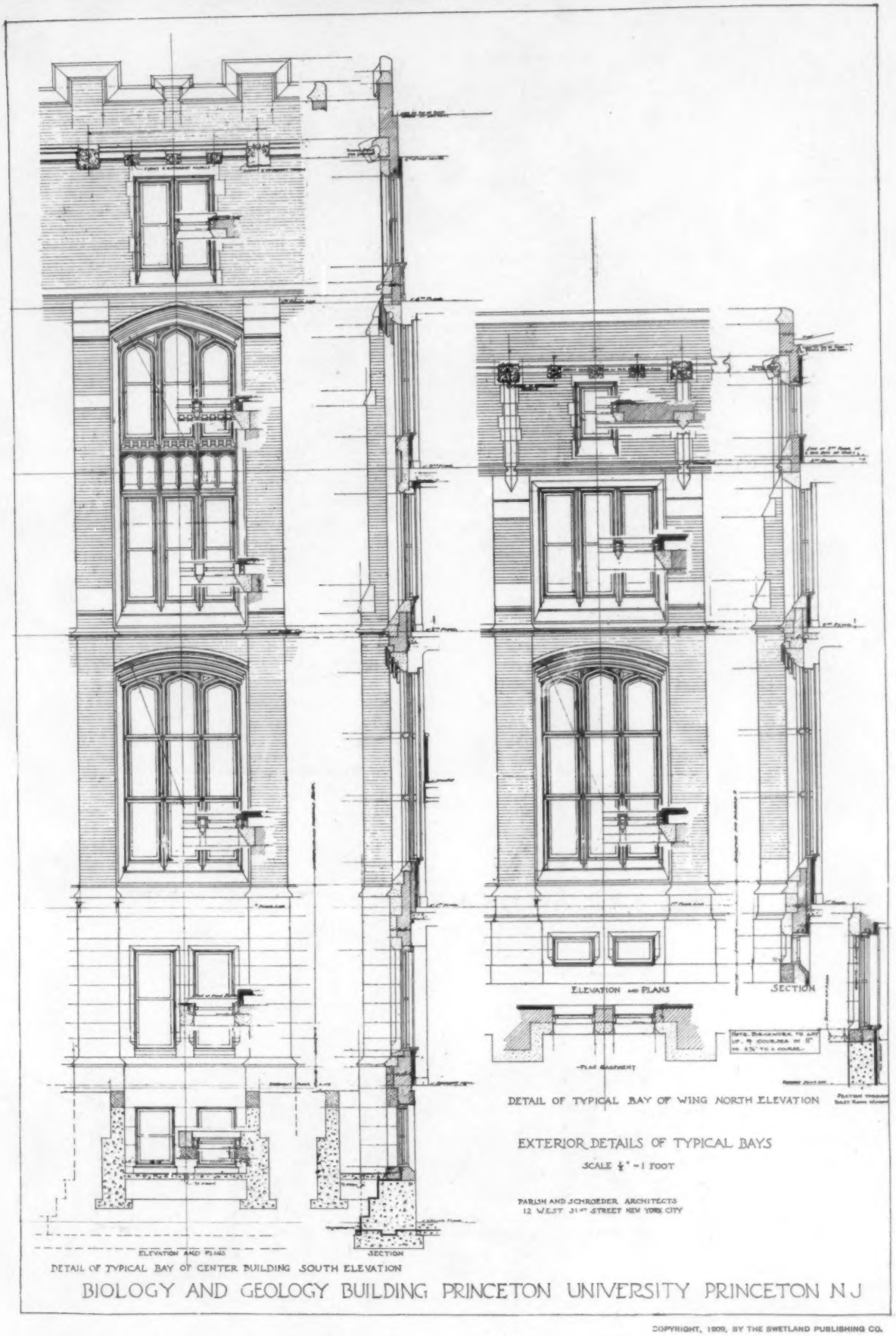
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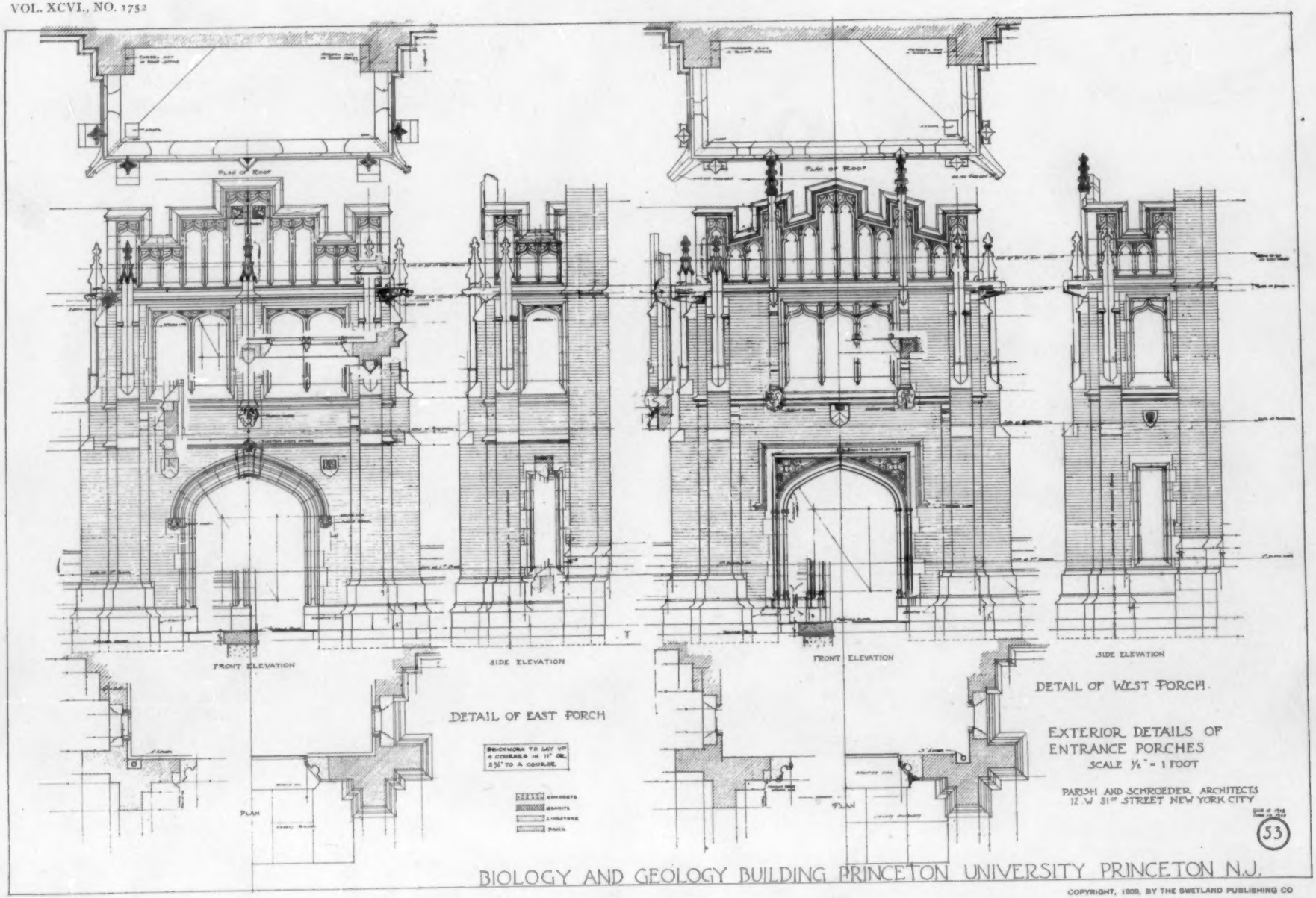

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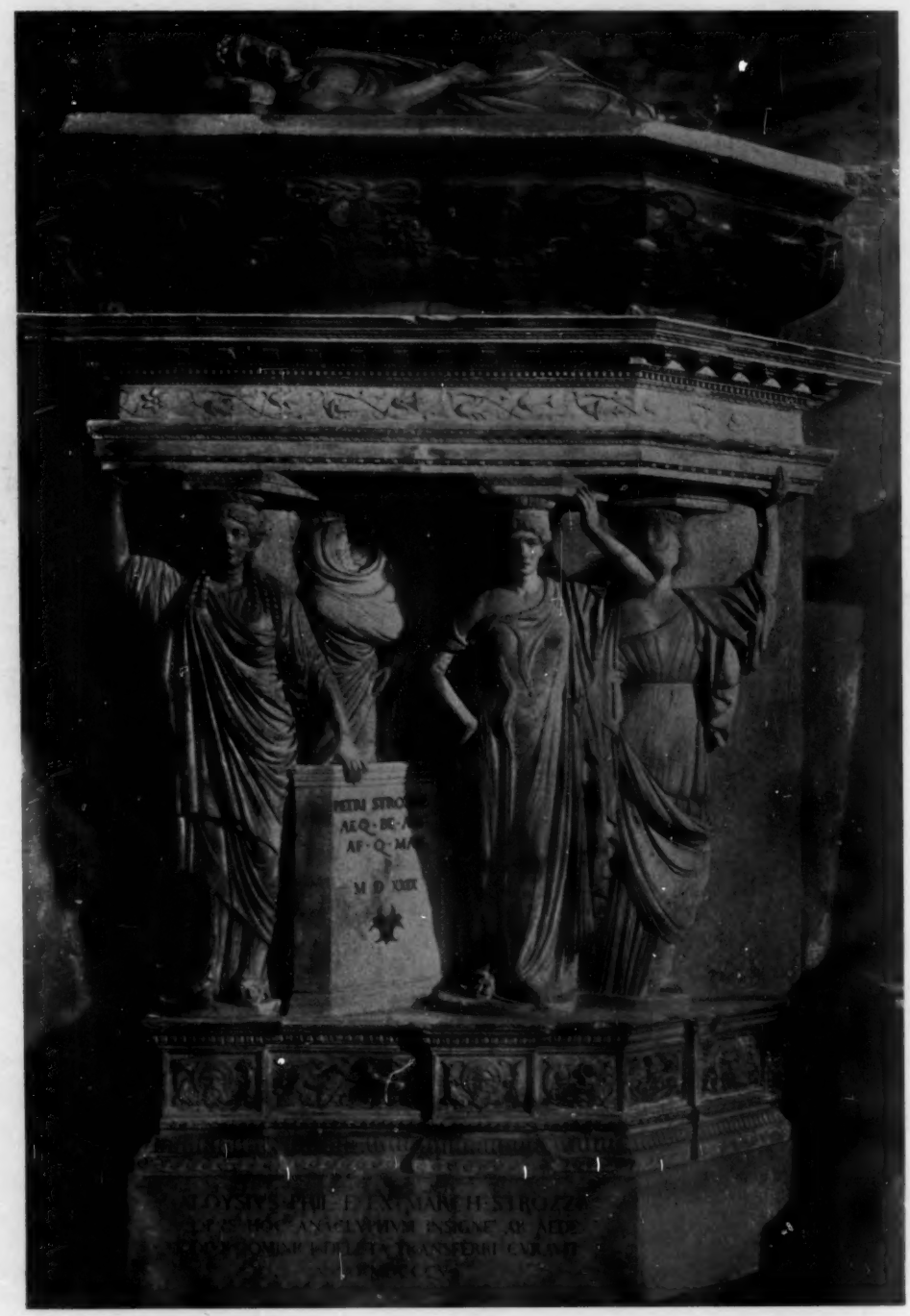

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